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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/697,456	10/30/2003	David Pin	15436.128.1	7981

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EXAMINER

PETKOVSEK, DANIEL J

ART UNIT

PAPER NUMBER

2874

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/03/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	Application No. 10/697,456	Applicant(s) PIN ET AL.	
	Examiner Daniel J. Petkovsek	12/20/06	Art Unit 2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on RCE amendment filed December 12, 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 11-20,22-27 and 29-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-20,22-27 and 29-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on October 30, 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### DETAILED ACTION

This office action is in response to the RCE amendment filed December 12, 2006. In accordance with the amendment, claims 11, 12, 20, and 27 have been amended, while claims 1-10, 21, 28, and 33-35 have been formally canceled. However, the amendment does not present a new issue or consideration, as the amendments to independent claims 11, 20, and 27 have already been examined. In combination with arguments that are not persuasive, **this action has been made FINAL.**

Claims 11-20, 22-27, and 29-32 are pending.

#### *Continued Examination Under 37 CFR 1.114*

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on December 12, 2006 has been entered.

#### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 11-20, 22-27, and 29-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brun et al. U.S.P. No. 6,582,135 B2, and further in view of Hwang et al. US 2003/0077047 A1.

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Brun et al. U.S.P. No. 6,582,135 B2 teaches (Figs. 1-3; column 6, line 29 through column 8, line 63) an integrated coaxial optical component (any manufacturing use being intended) comprising: an optical filter 24 coupled to a collimating lens 22, wherein the collimating lens 22 has a front face and a rear face that is beveled at an angle (see column 8, lines 45-53, etc.); a dual fiber element 16 having fibers (18, 20) attached to the collimating lens 22, wherein the dual fiber element front face is beveled at an angle that is parallel to the rear face of collimating lens 22, so that adequate alignment can be accomplished (see column 8, lines 45-53); a plurality of glass (fused silica) spacers 14/36 disposed *about* the dual fiber collimator; and a metal housing 32 including two ends in which permanent securement is made by a solder/welding 31 component that joins the entire optical apparatus (this regards to narrowest independent claim 20).

Brun et al. '135 does not *explicitly* teach that the solder/welding component is *epoxy*, or the dual fiber element is a *pigtail* (also claim 11). A person having ordinary skill in the art at the time the invention was made would have recognized that the solder/welding component 31 performs the same function as the epoxy as claimed in this application (these elements are art recognized for performing the particular function at hand). The solder joins the dual fiber collimator to the metal housing in the same manner as an epoxy would. A person having ordinary skill in the art at the time the invention was made would have recognized that the dual fiber element performs the same function as a dual fiber pigtail in this application (the words "pigtail" are not explicitly used with "dual fiber"). The dual fiber element and a dual fiber pigtail are art recognized equivalents for the purpose of coupling optical signals, and other embodiments using "pigtails" are disclosed (see column 21, lines 28-35).

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Brun et al. '135 does not *explicitly* teach that optical epoxy is used to attach the collimating lens and the dual fiber element and other secure attachments (independent claims 20 and 27, claim 12).

Hwang et al. US 2003/0077047 A1 teaches (Fig. 1) a dual fiber element 2 attached to a collimating lens 4 using an optical epoxy 8. Hwang '047 disclosed the same general inventive concept as the current application.

Since Brun et al. '135 and Hwang et al. '047 are both from the same field of endeavor, the purpose disclosed by Hwang et al. '047 would have been recognized in the pertinent art of Brun et al. '135.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to attach two optical components in a system with an optical epoxy to improve the optical coupling and maintain connectivity in optical alignment. Although Brun et al. '135 is silent to the use of optical epoxy between the dual fiber element and the collimating lens 22, an optical epoxy is used between other optical components (i.e. collimating lens 22 and filter 24).

Regarding claims 13, 14, and 22, a GRIN (graded index) lens is used (see Fig. 3).

Regarding claims 15 and 23, the optical component is adapted to be used at least as a three-port device.

Regarding claims 16, 24 and 31, a solder hole 32a exists in the housing.

Regarding claims 17, 18, 25, 26, and 30, a second optical element (single fiber collimator (34/39)) is extended in the metal housing and aligned to the dual fiber collimator (see Fig. 3).

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Regarding claim 29, see Figure 3 for these specific components as fully disclosed in the rejections above.

Regarding claims 19 and 32, the element is secured using solder.

***Response to Arguments***

4. Applicant's arguments filed December 12, 2006 have been fully considered but they are not persuasive. Applicant traverses the 35 U.S.C. 103(a) rejections to claims 11-20, 22-27, and 29-32 under Brun et al. U.S.P. No. 6,582,135 B2, and further in view of Hwang et al. US 2003/0077047 A1.

Applicant asserts that the prior art does not teach or reasonably suggest the “glass spacers” limitation. The Examiner respectfully disagrees with this assertion. In the previous office action, the Examiner indicated that the spacers *can* be made of glass. This is what the statement “Regarding claims 12, 21 and 28, the sleeves/ferrules (acting as spacers) can be made of glass” was referring to in the previous office action (final rejection mailed July 12, 2006). Spacers 14 can be made of fused silica, which is a subset of glass (and spacer 37 is disclosed as being “glass”, see Figure 3). Applicant used a broader claim construction in independent form, and the Examiner further rejected dependent claims with spacers 14/36, made of glass.

Applicant again asserts that the prior art does not teach or reasonably suggest the “dual fiber pigtail” limitation. The Examiner again respectfully disagrees with this assertion. Clearly, from column 21, lines 27-62 of Brun et al. ‘135, fiber pigtails are disclosed in another embodiment. As such an analogous use is *expressly* taught in the prior art cited. Applicant states that “it appears that the Examiner is relying on personal knowledge as a basis for rejecting claims 11 and 20.” (page 14, response filed April 25, 2006). However, the Examiner has relied

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upon the teaching of the prior art (Brun et al. '135, Hwang et al. '047 ; and other references as cited in the PTO-892 form). The Examiner is *interpreting* what a person having ordinary skill in the art would have recognized from the teaching of the prior art, to come to the conclusion that dual fiber "element" and dual fiber "pigtail" have equivalent function in the art based on the disclosed embodiments (see, for example, column 21, lines 27-62 of Brun et al. '135). Again, "personal knowledge" was not relied upon in the 35 U.S.C. 103 (a) rejection, an affidavit under 37 CFR 1.104(d)(2) is not required.

### ***Conclusion***

5. This is a RCE of applicant's earlier filed Applicant, which had previously been finally rejected on July 12, 2006. All claims (11-20, 22-27, and 29-32) are drawn to the same invention claimed in the earlier application and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the earlier application. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action in this case. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no, however,


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event will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Petkovsek whose telephone number is (571) 272-2355. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Daniel Petkovsek  
December 20, 2006

  
SUNG PAK  
PRIMARY EXAMINER